Exhibit 300: Capital Asset Summary

Part I: Summary Information And Justification (All Capital Assets)

Section A: Overview & Summary Information

Date Investment First Submitted: 2009-06-30
Date of Last Change to Activities: 2012-07-31
Investment Auto Submission Date: 2012-02-28
Date of Last Investment Detail Update: 2012-06-29
Date of Last Exhibit 300A Update: 2012-08-16
Date of Last Revision: 2012-08-16

Agency: 006 - Department of Commerce **Bureau:** 48 - National Oceanic and Atmospheric Administration

Investment Part Code: 01

Investment Category: 00 - Agency Investments

1. Name of this Investment: NOAA/NWS/ Next Generation Weather Radar (NEXRAD-PI) System Product Improvement

2. Unique Investment Identifier (UII): 006-000310200

Section B: Investment Detail

1. **Provide a brief summary of the investment, including a brief description of the related benefit to the mission delivery and management support areas, and the primary beneficiary(ies) of the investment. Include an explanation of any dependencies between this investment and other investments.**

The objectives of the NEXRAD Product Improvement (NPI) Program are to apply advancements in radar meteorology and radar engineering to improve the performance of the nation's weather radar network. Performance improvement objectives align with NOAA's Strategic Plan to serve society's needs for water and weather information. Specific objectives include increasing lead time and accuracy for weather forecasts and warnings (tornados, severe winter storms, and flash flood forecasts and warnings) and reduce the time required to transition advances in science and technology from research to the operational community. In FY07 a key new NEXRAD project was initiated. This new project, Dual Polarization, promotes capacity development by capturing additional atmospheric data, useful not only for improved precipitation estimation and hydrometeor classification, but also for numerical model input.

2. **How does this investment close in part or in whole any identified performance gap in support of the mission delivery and management support areas? Include an assessment of the program impact if this investment isn't fully funded.**

Production deployment in FY11 of Dual Polarization begins September 2011 and runs

through September 2013. As he Dual Polarization modification is deployed to NEXRAD systems, the geographical areas served by those systems will see improvements in precipitation estimates and capability to detect and report severe weather. Economic analysis shows that improvements in precipitation estimation accuracy alone will have a national economic benefit of $690M/year as a result of improvements in flash flood warnings. The improved precipitation estimates from the national network of radars will be used as input to weather models with a concomitant improvement in model outputs. Long term outcome: The Dual Polarization capability will allow other improvements in severe weather detection, including improvements in snow storm detection and warnings, icing conditions for air and ground transpportation, and continued support for improved modeling data input. Dual Polarization data is envisioned as the next quantum step in radar meteorology. Not fully funding the program will result in an incomplete implementation of Dual Polarization, with the capability not available on some number of radars (determined by the level of funding shortfall). Therefore the benefit of dual polarization will be available only in select areas. Also, the operational-cycle costs will be higher, due to the added costs of maintaining multiple configurations(dual pol and non-dual pol).

3. **Provide a list of this investment's accomplishments in the prior year (PY), including projects or useful components/project segments completed, new functionality added, or operational efficiency achieved.**

Dual Polarization capability implemented on five operational NEXRAD systems as a part of the Beta Test phase of the Dual Polarization Program.

4. **Provide a list of planned accomplishments for current year (CY) and budget year (BY).**

Current Year: Dual Polarization capability implemented on 96 operational NEXRAD systems. Budget Year: Dual Polarization capability impletemented on 57 operational NEXRAD Systems, completing the Dual Polarization modification to all NEXRAD systems.

5. **Provide the date of the Charter establishing the required Integrated Program Team (IPT) for this investment. An IPT must always include, but is not limited to: a qualified fully-dedicated IT program manager, a contract specialist, an information technology specialist, a security specialist and a business process owner before OMB will approve this program investment budget. IT Program Manager, Business Process Owner and Contract Specialist must be Government Employees.**

2006-09-06

Section C: Summary of Funding (Budget Authority for Capital Assets)

1.

Table I.C.1 Summary of Funding

	PY-1 & Prior	PY 2011	CY 2012	BY 2013
Planning Costs:	$0.0	$0.0	$0.0	$0.0
DME (Excluding Planning) Costs:	$122.2	$13.0	$7.7	$0.0
DME (Including Planning) Govt. FTEs:	$5.4	$0.0	$0.0	$0.0
Sub-Total DME (Including Govt. FTE):	$127.6	$13.0	$7.7	0
O & M Costs:	$0.0	$0.0	$0.0	$0.0
O & M Govt. FTEs:	$0.0	$0.0	$0.0	$0.0
Sub-Total O & M Costs (Including Govt. FTE):	0	0	0	0
Total Cost (Including Govt. FTE):	$127.6	$13.0	$7.7	0
Total Govt. FTE costs:	$5.4	0	0	0
# of FTE rep by costs:	38	0	0	0
Total change from prior year final President's Budget ($)		$2.6	$0.0	
Total change from prior year final President's Budget (%)		24.70%	0.00%	

2. If the funding levels have changed from the FY 2012 President's Budget request for PY or CY, briefly explain those changes:

No changes

Section D: Acquisition/Contract Strategy (All Capital Assets)

Table I.D.1 Contracts and Acquisition Strategy

Contract Type	EVM Required	Contracting Agency ID	Procurement Instrument Identifier (PIID)	Indefinite Delivery Vehicle (IDV) Reference ID	IDV Agency ID	Solicitation ID	Ultimate Contract Value ($M)	Type	PBSA ?	Effective Date	Actual or Expected End Date
Awarded	4732	GS07T00BGD0031:GST0707BG0202									

2. If earned value is not required or will not be a contract requirement for any of the contracts or task orders above, explain why:

Exhibit 300B: Performance Measurement Report

Section A: General Information

Date of Last Change to Activities: 2012-07-31

Section B: Project Execution Data

Table II.B.1 Projects

Project ID	Project Name	Project Description	Project Start Date	Project Completion Date	Project Lifecycle Cost ($M)
3102D07001	Dual Polarization	Development and Implementation of Dual Polarization capability for the nation's weather radar network (160 sites). New capability increases the weather radar's ability to detect severe winter weather, rainfall amount, and tornado damage.			

Activity Summary

Roll-up of Information Provided in Lowest Level Child Activities

Project ID	Name	Total Cost of Project Activities ($M)	End Point Schedule Variance (in days)	End Point Schedule Variance (%)	Cost Variance ($M)	Cost Variance (%)	Total Planned Cost ($M)	Count of Activities
3102D07001	Dual Polarization							

Key Deliverables

Project Name	Activity Name	Description	Planned Completion Date	Projected Completion Date	Actual Completion Date	Duration (in days)	Schedule Variance (in days)	Schedule Variance (%)
3102D07001	Integration Test Readiness Review	Compilation of data in preparation for integration testing	2011-07-12	2011-07-12	2011-07-12	1	0	0.00%

Key Deliverables

Project Name	Activity Name	Description	Planned Completion Date	Projected Completion Date	Actual Completion Date	Duration (in days)	Schedule Variance (in days)	Schedule Variance (%)
3102D07001	Beta Acceptance Testing	Beta testing is a slow rollout of inital operational sites to allow testing and valildation of installation procedures	2011-09-02	2011-09-02	2011-08-30	101	3	2.97%
3102D07001	Deployment Readiness Review	Assessment of adequate preparation for production deployment	2011-09-06	2011-09-06	2011-09-01	36	5	13.89%
3102D07001	System Test and Evaluation (ROC)	System Test activities related to Dual Pol redundant thread	2011-11-18	2012-01-24	2012-01-19	128	-62	-48.44%
3102D07001	Operational Test Readiness Rev	Summation of Operational Test Activities	2012-02-10	2012-02-24	2012-02-24	81	-14	-17.28%
3102D07001	Beta Acceptance Testing	Summation of activities in preparation for Beta Testing	2012-04-13	2012-07-03		60	-140	-233.33%
3102D07001	Deployment Readiness Review	Summation of activities in preparation for deployment of redundant thread modification kits	2012-08-24	2012-07-03		130	-7	-5.38%

Section C: Operational Data

Table II.C.1 Performance Metrics

Metric Description	Unit of Measure	FEA Performance Measurement Category Mapping	Measurement Condition	Baseline	Target for PY	Actual for PY	Target for CY	Reporting Frequency
Installation of Dual Polarization modification at a site	Number of systems modified	Technology - Information and Data	Over target	0.000000	7.000000	5.000000	90.000000	Monthly
Completion of Physical Configuration Audit to verify technical doumentation requirements met	requirements met; not complete-0; complete-1	Process and Activities - Quality	Over target	0.000000	0.000000	0.000000	1.000000	Semi-Annual
Number of trained field maintenance technicians	Trained techncian	Process and Activities - Quality	Over target	0.000000	12.000000	12.000000	112.000000	Monthly
Availability of Dual polarization data to private and public sector data users	Percent of radars producing dual pol data	Mission and Business Results - Services for Citizens	Over target	0.000000	4.000000	4.000000	65.000000	Quarterly
Improve Severe Weather Warnings for Flash Floods	minutes of warning lead time	Customer Results - Customer Benefit	Over target	38.000000	38.000000	38.000000	42.000000	Semi-Annual